

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING

PCT

WRITTEN OPINION

(PCT Rule 66)

To: KIM, Seog-Hyun 9th Floor, Daekyung Bldg., 120, 2-ka Tacpyung-ro, Chung-ku, 100-724 Seoul, Republic of Korea

Date of mailing <i>(day/month/year)</i> 09 JULY 2004 (09.07.2004)
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Applicant's or agent's file reference OP03-1029	REPLY DUE within 2 months from the above date of mailing
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International application No. PCT/KR2003/001301	International filing date <i>(day/month/year)</i> 02 JULY 2003 (02.07.2003)	Priority date <i>(day/month/year)</i> 02 JULY 2002 (02.07.2002)
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International Patent Classification (IPC) or both national classification and IPC IPC7 C12N 9/10
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Applicant GENOMINE INC. et al

1. This written opinion is the first (first, etc.) drawn by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

When ? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d)

How ? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3
 For the form and the language of the amendments, see Rules 66.8 and 66.9

Also For an additional opportunity to submit amendments, see Rule 66.4
 For an examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis
 For an informal communication with the examiner, see Rule 66.6

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 23 OCTOBER 2004 (23.10.2004)

Name and mailing address of the IPEA/KR Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea
Facsimile No. 82-42-472-7140

Authorized officer CHO, YOUNG GYUN
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WRITTEN OPINION

International application No.

PCT/KR2003/001301

I. Basis of the opinion

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement) under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

- ☒ contained in the international application in printed form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheet/fig. _____

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed."

WRITTEN OPINION

International application No.

PCT/KR2003/001301

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	5-9, 12-16, 17-19	YES
	Claims	1-4, 10, 11	NO
Inventive step (IS)	Claims	17-19	YES
	Claims	5-9, 12-16	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims	None	NO

2. Citations and explanations

★ 참고 문헌

D1: GenBank Accession No. T48458. 20 April 2000

D2: US 5,477,001 A (ELF SANOFI et al.) 19 December 1995

D1에는 *Arabidopsis thaliana* 유래의 469개의 아미노산으로 이루어진 8-amino-7-oxononanoate synthase-like protein이 기재되어 있고,

D2에는 beta-1,3-glucanase activity를 갖는 단백질을 코딩하는 재조합 DNA, 이를 포함하는 발현 벡터, 발현 벡터를 포함하는 형질전환 식물 세포, 형질전환 식물 및 종자에 관한 기술이 기재되어 있습니다.

I. Novelty

이 출원의 특허청구범위 제1항 내지 제4항, 제10항 및 제11항은 SEQ. ID. NO. 2의 아미노산 서열을 포함하는 본원발명의 polypeptide, 이를 코딩하는 polynucleotide 및 상기 polynucleotide와 상보적인 antisense polynucleotide에 관한 것이나, 본원발명의 우선권 주장일 이전에 공개된 D1에 *Arabidopsis thaliana* 유래의 SEQ. ID. NO. 2의 아미노산 서열과 동일한 아미노산 서열이 기재되어 있는 바, 본원발명은 출원 전 공지된 발명이므로 PCT 조약 제33조(2)항의 규정에 의거하여 그 신규성을 인정할 수 없습니다.

II. Inventive Step

이 출원의 특허청구범위 제5항 내지 제9항 및 제12항 내지 제16항은 제3항의 polynucleotide 또는 제10항의 antisense polynucleotide를 포함하는 발현 벡터, 발현 벡터를 포함하는 형질전환 세포, 형질전환 식물 및 종자에 관한 것이나, 본원발명의 우선권 주장일 이전에 공개된 D1에 *Arabidopsis thaliana* 유래의 SEQ. ID. NO. 2의 아미노산 서열과 동일한 아미노산 서열이 기재되어 있고, D2에 beta-1,3-glucanase activity를 갖는 단백질을 코딩하는 재조합 DNA, 이를 포함하는 발현 벡터, 발현 벡터를 포함하는 형질전환 식물 세포, 형질전환 식물 및 종자에 관한 기술이 기재되어 있는 바, 본원발명의 공지된 단백질의 유전자를 포함하는 발현 벡터, 발현 벡터를 포함하는 형질전환 식물 및 종자는 상기 인용문헌 D1과 D2로부터 당업자가 용이하게 발명할 수 있는 정도의 것으로 PCT 조약 제33조(3)항의 규정에 의거하여 그 진보성을 인정할 수 없습니다. 끝.

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